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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,540	05/29/2001	Kari Kirjavainen	2000792US	4027

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EXAMINER
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DINH, TIEN QUANG

ART UNIT	PAPER NUMBER
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3644

DATE MAILED: 02/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/865,540

Applicant(s)

KIRJAVAINEN, KARI

Examiner

Tien Dinh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-10, 12, 13 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 12, 13, 22-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4, 6-10, 12, 13, and 22-27 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claim 22, it is not understood how the blades can be rotated if their ends are connected together by the joint rings please explain.

Please note that the rejection of claim 22 above and applicant's explanations further confuse the subject. First, the applicant refers to page 7, line 23 through page 8, line 3 to clarify claim 22 about how the blades can be rotated if their ends are connected together by the joint rings. Page 7, line 23 through page 8, line 3 explains the working of figure 12 which was non-elected in the restriction of the previous office action. Furthermore, applicant elected species A, which shows that there are joint rings 6 and 7. The details of how the blades can rotate with respect to the joint rings were never disclosed. Please explain.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-10, 12, 13, 22, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Meek (Canadian reference '581).

Meek discloses an aircraft rotor having at least two blades that rotate to form a conical surface. The blades 3, 3' are adjusted to be positive to provide propulsive force. The ascending force coefficients on the forward and rear side can be adjusted to have opposite signs (see pages 3-5). The ends of the blades belong to the same rotor are connected by elements 4 and 5. The ascending force coefficients can be adjusted as a function of the angle of rotation of the rotor and are arranged to be adjusted by changing the blade angle of the blades. The rotor has circular rotor rim to which the blades are arranged (see figures 1, 2, and 7). The aircraft has rotors arranged on top of each other. The aircraft functions as a wind generator and can be a dwelling for the pilot.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meek in view of Langford and Marsi.

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Meek discloses all claimed parts except for the use of fuel cells to power electric motors that rotate and control blade angles. However, Langford discloses that electric motors to rotate rotors and are powered by fuel cells are well known in the art. Marsi discloses that electric motors to change the blade angles are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used fuels cells and electric motors to rotate the blades and change the pitch angle of the blades in Meek's system as taught by Langford and Marsi to create a more efficient and quieter system.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meek in view of Langford and Iturralde.

Meek discloses all claimed parts except for surfaces being made up of solar cells. However, Iturralde discloses that surfaces made up of solar cells are known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used solar cells on the surfaces Meek's system as taught by Iturralde to generate electricity.

### ***Response to Arguments***

In response to applicant's on the Meek reference, please note that the claims calls for the blades when rotating form a conical surface. The claims do not call for the approximately 45 degree angle. This renders some of the applicant's arguments moot. As for the argument about the ascending force coefficients being positive on the forward side and opposite on the rear side, please note that Meek inherently discloses this since

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his system operates in helicopter mode. One skilled in the art would recognize that to move in the desired direction, the blades are operated via swashplates. The swashplates can be adjusted (via collective pitch) to be positive so that the aircraft can take off. Please note that propeller 6 can or it can not be used in the helicopter mode. The blades 3 and 3' when operated in helicopter mode can be used to adjust to provide ascending force and to provide propulsive force. As for the argument that the blades 3, 3' can be stopped, this is used in a non-helicopter mode. When used in helicopter mode, the ascending force coefficients can be adjusted to provide propulsive force. Please note that when the aircraft moves horizontally in helicopter mode, the blades (either forward or rear) on the forward and rear side having opposite signs (via swashplates) in order to the aircraft to move forward or backward.

As for the Langford, Marsi, and Iturralde references, please note that the examiner when combined with Meek meets the limitation of the claims and therefore, they are still present in the rejections.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 703-308-2789. The examiner can normally be reached on 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Jordan can be reached on 703-306-4159. The fax phone numbers for the organization where this application or proceeding is assigned are 703-306-4195 for regular communications and 703-306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-4195.

TD  
February 22, 2003

  
CHARLES T. JORDAN  
SUPERVISOR, PATENT EXAMINER  
TECHNOLOGY CENTER 3600